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Child maltreatment in the time of COVID-19: Changes in the Florida foster care system surrounding the COVID-19 safer-at-home order

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ABSTRACT

Background: Media outlets have suggested that rates of child maltreatment may increase during the global COVID-19 pandemic. The few empirical studies that have examined pandemic related changes in rates of child maltreatment have relied predominantly on reports of suspected maltreatment.

Objective: This study examines rates of documented, substantiated child maltreatment resulting in foster care placement, as well as demographic correlates of child maltreatment within the foster care system, before and during the COVID-19 pandemic.

Participants and setting: Data were available for all youth in the FL foster care system from January 1, 2001 through June 30, 2020 (i.e., > 304,000 youth; > 1.1 million total placements).

Methods: This study utilizes data from the Florida State Automated Child Welfare Information System (SACWIS).

Results: Results revealed a decrease in the number of youths placed in the FL foster care system during the COVID-19 pandemic with the greatest reduction in April, 2020 during the Safer-at-Home Order (24 % fewer youth in 2020 than 2019). In contrast, the percentage of placements into foster care due to maltreatment increased by 3.34 %. Demographic-linked differences were observed in placement rates and exposure to maltreatment.

Conclusions: While prior work suggests that reports of child maltreatment have decreased during the COVID-19 pandemic, this study demonstrates that overall rates of substantiated maltreatment resulting in foster care placement have increased for White youth, while rates of placement of due to inadequate supervision, emotional neglect, and/or parental substance use have decreased for Black youth. Implications for policy and future research are discussed.

1. Introduction

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) or coronavirus disease 2019 (COVID-19) has resulted in the largest global pandemic in over a century (Helmy et al., 2020). As of January, 2021, COVID-19 had over 86.7 million cases documented

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worldwide and had been associated with over 1.87 million deaths (Johns Hopkins University Coronavirus Resource Center. COVID-19 dashboard, 2020). By mid-March, 2020, much of the U.S. (i.e., 96 % of Americans) had been placed under mandatory Stay-at-Home Orders to slow the spread of the virus (Center for Disease Control & Prevention, 2020). As a result of the Stay-at-Home Orders, the majority of schools in the U.S. (and worldwide) terminated in-person instruction and transitioned to remote instruction resulting in over 1.5 billion youth being out of school worldwide (Raman et al., 2020; UNICEF, 2020). Further, many non-essential services, including non-essential medical and mental health services, were placed on hold or transitioned to remote practice during the Stay-at-Home Orders and beyond (Center for Disease Control & Prevention, 2020; Raman et al., 2020).

Throughout the progression of the COVID-19 pandemic numerous media outlets have reported claims that the incidence and prevalence of child maltreatment may increase during the pandemic and Stay-at-Home Orders. These outlets have speculated that increases may be due to increased parental stress, as well as lack of child care, increased time spent in the home, uncertainty about the future, changes in economics, and more (Brooks et al., 2020; Brown, Doom, Lechuga-Peña, Watamura, & Koppels, 2020; Danese, Smith, Chitsabesan, & Dubicka, 2020; Griffith, 2020). For example, a story by Laura Santhanam of the PBS News Hour titled "Why child welfare experts fear a spike of abuse during COVID-19" was released on April 6, 2020 (Santhanam, 2020). The possibility of an increase in the rates of child maltreatment during the COVID-19 pandemic is particularly concerning, given that under typical (i.e., non-pandemic) circumstances, approximately one in eight children in the U.S. have experienced child maltreatment in their lifetime (Wildeman et al., 2014) and child maltreatment is associated with a host of negative sequelae, including increased risk for the development of psychopathology, as well as important alterations to neural development (McLaughlin, Weissman, & Bitrán, 2019; Toth & Manly, 2019). However, to-date, few empirical studies have examined changes in rates of child maltreatment during the COVID-19 pandemic.

Of note, these same media outlets have claimed that reports of maltreatment to Child Protective Services have decreased during the pandemic. These outlets have speculated that this decrease may be due to decreased monitoring of youth by mandated reporters, such as teachers and service providers (e.g., doctors, mental health service providers; Jonson-Reid, Drake, Cobetto, & Ocampo, 2020). For example, Nikita Steward of the New York Times reported "Child Abuse Cases Drop 51 Percent. The Authorities Are Very Worried" on June 9, 2020 (Stewart, 2020). To our knowledge, to date, only four empirical studies have demonstrated that reports of suspected child maltreatment to Child Protective Services (CPS) have declined during the COVID-19 pandemic (Jonson-Reid et al., 2020).

Studies examining rates of child maltreatment that rely on reports of suspected maltreatment to CPS have an important limitation: such reports have not been investigated, resulting in undetermined substantiation. Furthermore, studies relying on reports of suspected maltreatment to CPS do not allow for further investigation into demographic differences in rates of child maltreatment, as limited demographic information is typically available. In order to address these limitations, the present study examined rates of child maltreatment before and during the COVID-19 pandemic by examining rates of placement in the Florida Foster Care system, as well as rates of documented, substantiated child maltreatment as the reason for placement into the Florida Foster Care System both before and during the global COVID-19 pandemic. This study also examines individual differences associated with changes in rates of maltreatment as the reason for placement. That is, rates of placement and maltreatment are examined according to child age, citizenship, ethnicity, language, presence of documented disability or behavioral problem, race, and sex. Thus, this study is innovative in that it is among the first to examine changes in the rates of documented, substantiated child maltreatment during the COVID-19 pandemic. Examining changes in rates of child maltreatment, as well as demographic correlates of such changes, is a first step in informing future policy and decision making regarding child welfare and protections during local, national, and global crises.

Prior work has demonstrated that rates of child maltreatment increased in the context of prior national emergencies and pandemics (Curtis, Miller, & Berry, 2000; Keenan, Marshall, Nocera, & Runyan, 2004; Peterman et al., 2020; Seddighi, Salmani, Javadi, & Seddighi, 2019). However, to our knowledge, only four empirical studies have examined rates of reporting of child maltreatment in the context of the current, global COVID-19 pandemic. Specifically, Rapoport, Reisert, Schoeman and Adesman (2020) and Whaling and colleagues (in preparation) examined data from New York City's Administration for Children's Services to investigate the rate of Child Protective Services case openings during March, 2020 and found that odds of opening such a case were 21 % lower than in the prior 7 years (Rapoport et al., 2020; Whaling et al., 2020). Barboza, Schiamberg and Pachl (2020) utilized data regarding geospatial locations of reports of suspected child maltreatment to examine demographic correlates of such reports during the COVID-19 pandemic. Additionally, Baron et al. (in press) examined data from the Florida Department of Children and Families and reported that the number of reports made to the Florida Child Abuse Hotline was 27 % lower than expected for March and April, 2020 (Baron et al., 2021). Thus, there is preliminary support for a reduction in the number of reports of suspected child maltreatment made to Child Protective Services during the COVID-19 pandemic.

These prior studies are limited in that each examined reports made to local Child Abuse Hotlines (i.e., Child Protective Services [CPS]), and as such, these studies are unable to determine or assess rates of child maltreatment that were deemed to be substantiated and sufficient for removal of the youth by Child Protective Services and placement into foster care. The present study sought to address these limitations.

Approximately, 4.3 million cases of suspected maltreatment were reported to CPS in 2018 (Children's Bureau of the Administration on Children, Youth, and Families, 2020). Of those, approximately 16.1 % of cases reported were deemed to be substantiated (Children's Bureau of the Administration on Children, Youth, and Families, 2020). Further, of those cases deemed to be substantiated, approximately 22.9 % of youth were placed into foster care (Children's Bureau of the Administration on Children, Youth, and Families, 2020). That is, 3.69 % of reports to CPS lead to foster care placement due to substantiated maltreatment in 2018 Children's Bureau of the Administration on Children, Youth, and Families, 2020).

Importantly, a second limitation of studies examining changes in rates of child maltreatment during the COVID-19 pandemic via reports made to CPS is that such studies typically are unable to examine for whom such changes were most prominent. That is, such

studies generally do not have access to demographic information, and as such, these studies cannot address questions related to demographic correlates of changes in rates of child maltreatment during the COVID-19 pandemic. The present study addresses this limitation.

Racial and ethnic minorities have been shown to be disproportionately affected by COVID-19. Specifically, initial prevalence and mortality estimates suggest that both are substantially higher among Black and Latinx individuals than among White individuals (Hooper, Napoles, & Perez-Stable, 2020). Further, it is well-established that ethnic and racial minor youth are disproportionately represented in the foster care system. For example, in 2017, Black youth accounted for 23 % of youth in foster care, while accounting for only 14 % of youth in the U.S., and Hispanic/Latinx youth accounted for 21 % of youth in the foster care system while accounting for 25 % of youth in the U.S. (Adoption and Foster Care Analysis and Reporting System (AFCARS) Report (2019)). Therefore, we explore trends in the demographic characteristics of youth placed in foster care, as well as rates of specific types of child maltreatment among these youth, both before and during the COVID-19 Shelter-In-Place Order to determine whether youth from different demographic backgrounds (e.g., ages, ethnicities, races) were disproportionately affected.

2. Description of the present study

The present study utilizes data from a large, publicly available database including information on removals and placements for all youth in the foster care system in the state of Florida from January 1, 2001 through June 30, 2020. To our knowledge, this is the first study to utilize data on removals and placements of youth into foster care to examine changes in the rates of documented, substantiated cases of child maltreatment during the COVID-19 pandemic.

The first case of COVID-19 in Florida was reported on March 1, 2020 (Mullery & Boschma, 2020). Public schools in the state of Florida closed on March, 16, 2020 (Baron et al., n.d.; Mullery & Boschma, 2020). The Governor of Florida issued a state-wide, 30-day "Safer-at-Home" Executive Order (Number 20–91) on April 1, 2020, which was lifted on May 4, 2020 (Mullery & Boschma, 2020). However, the incidence and prevalence of COVID-19 continued to increase until several media outlets were describing Florida as the global epicenter of the pandemic on July 13, 2020 (Marcus, 2020; Mullery & Boschma, 2020).

The goal of this study was to understand the potential impact of the COVID-19 pandemic, as well as the state-wide "Safer-at-Home" Executive Order, on the number of removals and placements in the FL foster care system, rates and types of child maltreatment experienced by youth prior to placement in the FL foster care system, as well as to examined these changes according to specific demographic, during the COVID-19 pandemic.

Herein, we use the phrase "placements in the FL foster care system" to refer specifically to youth who have been removed from their families and placed in the FL foster care system during the specified time-frame, regardless of whether this was a first-time removal or a subsequent-removal. In using this term, we are not referring to youth who have moved placements (e.g., from relative foster care to a group home) during the specific time-frame. Additionally, herein, we define child maltreatment as the presence of one or more of the following: physical abuse, sexual abuse, physical neglect, medical neglect, inadequate supervision, emotional abuse and neglect (Manly, 2005). We also examine rates of parental alcohol and substance abuse, as well as domestic violence, as documented reasons for removal and placement in foster care.

We hypothesize that:

1) There will be a decrease in the number of youths placed in foster care for the year 2020 compared to prior years dating back to 2001, given the COVID-19 pandemic.
2) The largest decrease in the number of youths placed in the foster care system during 2020 will occur during April, given the Florida-wide Safer-at-Home Order.
3) Removals and placements into foster care due to child maltreatment will increase during the month of the Safer-at-Home Order when compared to prior years.

Further, changes in rates of specific types of maltreatment experienced by youth in the foster care system will be explored in the context of the Safer-at-Home Order. However, specific hypotheses are not made in this regard. Additionally, we explore trends in the demographic characteristics of youth placed in foster care both before and during the COVID-19 Shelter-in-Place Order, as well as exposure to child maltreatment according to youth demographics, to determine whether youth from different demographic backgrounds (e.g., ages, biological sexes, ethnicities, races) were disproportionately affected. It is anticipated that Black and Hispanic/Latinx youth may have been disproportionately affected by the COVID-19 pandemic, as this has been observed in other domains impacted by COVID-19 (e.g., access to health care, unemployment rates, etc.; (Hooper et al., 2020)).

3. Method

3.1. Data and sample

Data were compiled from the State Automated Child Welfare Information System (SACWIS) maintained by Florida's Safe Families Network (FSFN) from January 1, 2001 through June 30, 2020. SACWIS data are submitted to the Adoption and Foster Care Analysis Reporting System (AFCARS), which is then submitted to the U.S. Department of Health and Human Services twice per year for each state. The Florida SACWIS data includes both individual youth case-level data, as well as placement-level data nested within the youth-level data. Further, the SACWIS database for the State of Florida serves as a record of the day-to-day case management activities for all

youth and families receiving child welfare services. To our knowledge, this is the first study utilizing data maintained via Florida SACWIS.

The Florida SACWIS database included 304,477 youth, 361,684 placements into care, and 1,168,556 total placements (including moving from one placement to another) within the Florida foster care and adoption systems at the time of extraction for analysis. Data were included in the current study if the youth's placement occurred between January 1, 2001 and June 30, 2020. Data were excluded from the current study if the youth were eighteen years of age or older and/or if the youth was placed in foster care or adopted outside of the state of Florida. Based on these inclusion and exclusion criteria 294,462 youth ages 0–17 years 11.99 months were included. This project was deemed exempt by the < masked for review > Institutional Review Board, given the publicly available, de-identified nature of the data.

3.2. Variables used in analyses

3.2.1. Demographic and youth characteristics

Demographic characteristics include: age at initial removal (i.e., difference between youth birthdate and removal date), biological sex (i.e., male, female), ethnicity (i.e., Hispanic/Latinx, non-Hispanic/Latinx,), race (i.e., Asian American, Black/African American, Native American, Pacific Islander/Hawaiian, White, Multiracial), US citizenship (i.e., citizen, non-citizen), and primary language (i.e., English, Haitian/Creole, Spanish, English-Spanish bilingual, other). Youth characteristics at the time of removal from primary caregiver(s) included: youth disability, youth behavior problems, youth alcohol abuse, youth drug abuse (i.e., each coded as present or absent).

3.2.2. Child maltreatment and primary caregiver characteristics at removal

The SACWIS database also includes data related to: experience of child maltreatment at time of removal (i.e., coded as present or absent; physical abuse, sexual abuse, physical neglect, medical neglect, inadequate supervision, emotional neglect) and primary caregiver characteristics relevant to removal (i.e., coded as present or absent; alcohol abuse parent, drug abuse parent, domestic violence).

3.3. Data analysis

3.3.1. Analysis plan

Data analysis proceeded in a multi-step approach in the R statistical environment (R Team, 2017). First, to test hypothesis 1 and 2 that, there will be a decrease in the number of youth placed in foster care for the year 2020 compared to prior years and that April (i.e., the month of the Stay-at-Home Order) would be particularly impacted, a changepoint analysis was applied to detect if and when temporal changes in the average number of placements occurred. The changepoint analysis was utilized specifically to account for seasonality in the data. Next, to further test hypotheses 1 and 2, an autoregressive ARIMA model was used to forecast the projected number of youths placed in the FL foster care system for each month of 2020 (i.e., January through June) based on data from prior years. Next, forecasted values for each month were compared to the recorded number of youths actually placed in the FL foster care system for each month of 2020.

To test hypothesis 3 that removals and placements into foster care due specifically to child maltreatment will increase during the month of the Safer-at-Home Order when compared to prior years rates of placements due to the presence of child maltreatment (as well as specific forms of maltreatment) were for 2019 (i.e., the year prior to the COVID-19 pandemic) to those of 2020 (i.e., the year of the COVID-19 pandemic), with a focus specifically on the month of April, which was the duration of "Safer-at-Home" Order in 2020 via Chi-square tests. Finally, examine whether the COVID-19 pandemic had a differential impact on youth in the FL foster care system according to youth demographics and characteristics and to explore whether there were meaningful differences in rates or types of maltreatment according to youth demographics from April, 2019 to April, 2020, incidence risk ratios (IRR) were calculated for each year and compared via Wald z-tests.

3.4. Power analysis

The data used for this study are a census of all foster placements in the state of Florida. Since these data are not a sample from the population, power analysis for this study is based on the ratio of missing data in the analysis compared to the known population size. Depending on the analysis, between 0% (e.g., child maltreatment information, race) and 13 % (e.g., the primary language of the foster youth) of the data were determined to be missing. Missing data analysis, including missing data pattern analysis for monotonicity, were conducted via R using functions from the packages "mice" and "finalfit." No patterns were discovered and the data were found to be monotonous. Power analysis was conducted using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007). Given the N = 294,462, the analytical power of the overall study (1-β error probability) was greater than 0.99, with an α error probability of 0.05.

4. Results

4.1. Changepoint analysis of trends in the number of youth placed in the Florida foster care system from 2001−2020

To test hypotheses 1 and 2 that there will be a decrease in the number of youths placed in foster care for the year 2020 compared to

prior years and April, 2020 (i.e., the month of the Stay-at-Home Order) would be particularly impacted, a multiple changepoint analysis was applied to detect if and when temporal changes in the average number of placements occurred. This method identified a maximum that stabilized between 7 and 10 change points.

Next, the binary segmentation method was used to detect significant changes in means to identify the precise locations of change points within the time series (Scott & Knott, 1974). Significant change points were identified in: December, 2004; March, 2007; January, 2014; August, 2017; and December, 2019. Fig. 1 shows the five changepoints detected in the number of youth placements in the FL foster care system from 2001−2020. The first hypothesis was supported, as 2020 (including December, 2019) was determined to differ significantly from prior years in the number of youths placed in the FL foster care system with an overall lower number of placements compared to prior years.

4.2. Forecasting the number of youth placed in the Florida foster care system in 2020 from 2001−2019

To further test hypotheses 1 and 2, we used a seasonal autoregressive ARIMA model to forecast a projected number of youths placed in the FL foster care system for each month of 2020 (i.e., January through June) based on data from 2014–2019. Based on the change point analysis, we chose to forecast using the 2014–2019 time series, given variation present in prior years. A series of forecasting models were run and fit using the auto.arima() function within the "forecasting" package of R (Hyndman & Khandakar, 2007). See Supplemental Material for information on model fit for the forecasting analysis. The best fitting model was determined to be ARIMA(0, 1,1)(1,0,0)$_{12}$ using terms up to the first order for both the non-seasonal (0,1,1) and seasonal (1,0,0) components of the model.

Next, forecasted values for each month were compared to the observed number of youths placed in the FL foster care system for January to June of 2020. The second hypothesis was supported, as demonstrated in Fig. 2, the forecasted number of youths for April, 2020 was significantly greater than the observed number of youths placed in the FL foster care system, given that the observed number of youths placed fell outside of the standard error of the forecasted value. Of note, the total number of youths placed in April, 2020 (N = 993) was reduced by 315 compared to April, 2019 (N = 1308) or a 24.08 % decrease in the number of youths placed. Given the significant difference detected for April, 2020, as well as our hypotheses related to effects of the "Safer-at-Home" Order, the analyses described throughout the remainder of the manuscript specifically compare data from April 2019 to April 2020 in order to adjust for seasonality, as described above.

4.3. Comparing rates and types of child maltreatment prior to and during the "safer-at-home" order

To test hypothesis 3 that removals and placements into foster care due specifically to child maltreatment will increase during the month of the Safer-at-Home Order, rates and types of experienced child maltreatment were also compared for youth placed in the FL foster care system in April, 2019 and April, 2020. The third hypothesis was supported, as the percentage of the sample with documented child maltreatment, at the time of removal from primary caregiver(s) was greater for April, 2020 (87.51 %) than April, 2019 (84.17 %; $X^2(1)$=4.84, p = .03. With respect to specific forms of child maltreatment, the percentage of youth removed and placed in foster care due to parental drug abuse and domestic violence was greater for April, 2020 than for April, 2019 (57.60 % vs. 42.74 %; $X^2(1)$=49.32, $p < .01$ and 27.69 % vs. 21.87 %; $X^2(1)$=10.09, $p < .01$, respectively), while the percentage of youth exposed to emotional neglect was lower for April 2020 (23.67 %) than for April, 2019 (27.60 %; $X^2(1)$=4.35, p = .04. As shown in Table 1, rates of removal due to other forms of child maltreatment did not differ from April, 2019 to April, 2020 (i.e., all $X^2(1) < 0.73$, $p > .39$).

4.4. Comparing youth demographic characteristics prior to and during the "safer-at-home" order

With respect to anticipated changes in demographics and characteristics of youth placed in the FL Foster Care System, as shown in Table 1, youth placed in the FL foster care system in April, 2019 compared to April, 2020, did not differ with respect to biological sex, ethnicity, US citizenship, primary language, nor with respect to the presence of documented disabilities, behavior problems, youth alcohol abuse, or youth drug abuse (i.e., all $X^2(1) < 3.67$, $p > .06$), However, as shown in Table 1, a larger percentage of youth in the birth to three age-range were placed in April, 2020 (41.29 %) compared to April, 2019 (36.85 %; $X^2(1)$=4.50, p = .03). Further, our
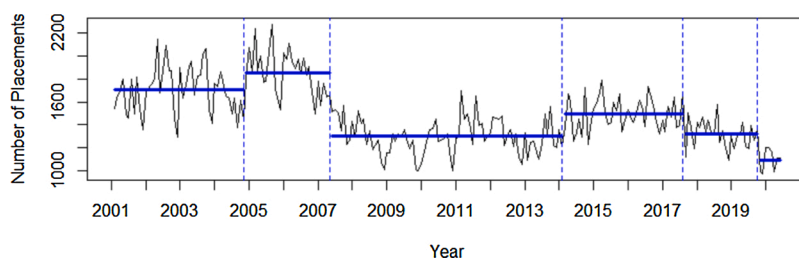

Fig. 1. Changepoint Analysis of Number of Placements in Florida Foster Care System, 2001-2020.
Note. Between January 1, 2001 and June 30, 2020, a total of five change-points were detected. A p-value of 0.05 was used as the cutoff to screen significant change points. The significant change-point occurred in: December, 2004; March, 2007; January, 2014; August, 2017; and December, 2019.
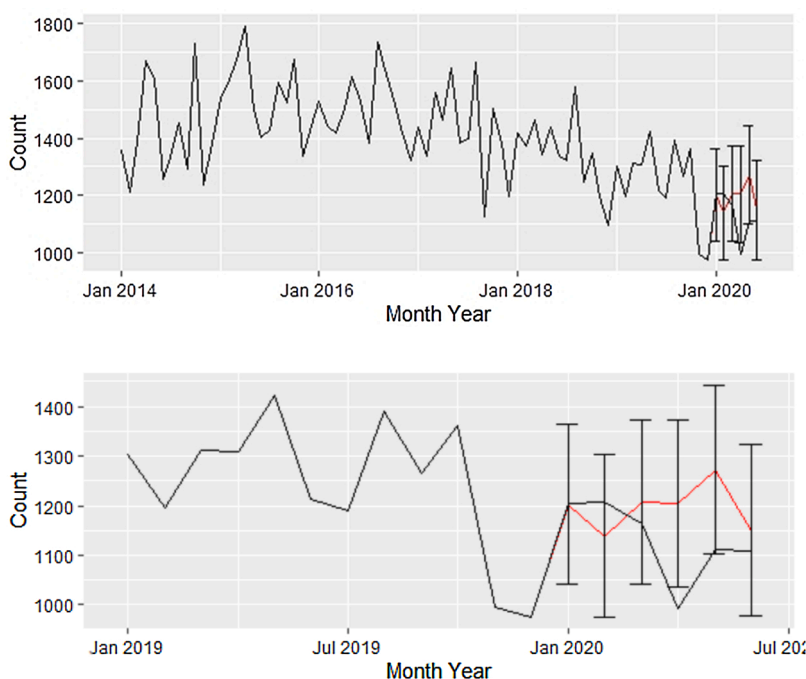
Fig. 2. Observed vs. Forecasted of Youth Placements in Foster Care for January through June 2020 from the Years 2014-2019 Based on the Seasonal ARIMA $(0,1,1)(1,0,0)_{12}$ Model.
Zoomed in to demonstrate significant difference between forecasted and observed number of youth placed in the FL foster care system in April, 2020.
Note. Observed counts of foster care placements (in solid line) compared to forecasted counts of foster care placements for 2020 (in dotted line). Of note, error bars for forecasted counts for April, 2020 *are outside of the observed counts.*

final hypothesis that the COVID-19 pandemic would disproportionately affect Black youth was supported, as a larger percentage of the youth placed were White (72.31 % vs. 67.58 %, respectively; $X^2(1)=5.73, p = .02$), while a smaller percentage of the youth placed were Black (31.12 % vs. 36.47 %, respectively; $X^2(1)=6.95, p = .01$; see Table 1) in April, 2020 compared to April, 2019. Of note, in April, 2020 compared to April, 2019, a larger percentage of youth placed were Native American (1.51 % vs. 0.31 %, respectively; $X^2(1)=8.59, p < .01$).

4.5. Exploring differences in rates and types of child maltreatment according to youth race prior to and during the "safer-at-home" order

Given the increased representation in White youth and decreased representation of Black youth in the foster care system from April, 2019 to April, 2020, as well as the changes in rates of types of maltreatment from April, 2019 to April, 2020 (i.e., reduced rates of emotional abuse; increased rates of parental drug abuse and domestic violence in April, 2020), we chose to explore whether differences in rates of specific types of maltreatment differed by youth race from April, 2019 to April, 2020. Overall, there was a significant increase in the risk of White youth experiencing removal and placement in foster care due to maltreatment from 2019 to 2020 ($Z=-2.37$, $p = .02$). Specifically, White youth were no more or less likely than non-White youth to experience removal and placement in foster care due to maltreatment in 2019 ($IRR = 1.03, p=.27$), but White youth were 15 % more likely than non-White youth to experience removal and placement in foster care due to maltreatment in 2020 ($IRR=1.15, p < .01$). With regard to specific forms of child maltreatment, there was a significant increase in risk of White youth being removed due to emotional abuse from 2019 to 2020 ($Z = 3.21, p < .01$). However, across both years, White youth were less likely than non-White youth to be removed due to emotional abuse (i.e., 44 % less likely in 2019 [$IRR=0.56, p < .01$] and 26 % less likely in 2020 [$IRR=0.74, p < .01$], respectively).

Among Black youth, there was a significant decrease in the risk of removal due to inadequate supervision from 2019 to 2020 ($Z = 2.13, p = .03$). Specifically, Black youth were at no more or less risk of being removed due to inadequate supervision in 2019 ($IRR=1.02, p = .86$), but Black youth were at a 28 % lower risk than non-Black youth of being removed due to inadequate supervision in 2020 ($IRR=0.72, p = .03$). Additionally, among Black youth, there was a significant decrease in the risk of being removed due to emotional abuse from 2019 to 2020 ($Z = 2.12, p = .03$). Specifically, Black youth were at a 73 % greater risk than non-Black youth of being removed due to emotional abuse in 2019 ($IRR=1.73, p < .01$), but Black youth were at no more or less risk of being removed due to emotional abuse in 2020 ($IRR=1.12, p = .34$). Among Black youth, there was a significant increase in risk of being removed due to parental drug abuse from 2019 to 2020 ($Z=-3.18, p < .01$); however, across both years, Black youth were less likely than non-Black youth to be removed due to parental drug abuse (i.e., 45 % less likely in 2019 [$IRR=0.55, p < .01$] and 32 % less likely in 2020 [$IRR=0.68, p < .01$], respectively). Finally, there was a significant decrease in the risk of Black youth being removed due to parental

Table 1
Demographic, maltreatment, and placement data comparisons for April 2019 vs. April 2020.

		April 2019 (n = 1308)	April 2020 (n = 993)	t or X^2	p-value
Demographics					
Age (mean, SD)		6.31 (5.28)	5.89 (5.33)	1.88	0.06
Categorical age:					
	Less than 1 mo	9.48	10.27	0.32	0.57
	0.00−3.00 yo	36.85	41.29	4.50	.03*
	3.01−5.99 yo	17.74	16.82	0.27	0.60
	6.00−12.99 yo	30.43	26.69	3.67	0.06
	13.00−17.99 yo	14.98	15.21	0.01	0.92
Sex:					
	% Male	51.07	49.35	0.61	0.44
Ethnicity					
	% Hispanic	17.43	16.82	0.11	0.74
Race					
	% White	67.58	72.31	5.73	.02*
	% Black	36.47	31.12	6.95	.01*
	% Asian American	0.54	0.50	< 0.01	0.99
	% Native American	0.31	1.51	8.59	<.01*
	% Pacific Island/Hawaiian	0.08	0.30	0.61	0.43
	% Multiracial	4.74	5.04	0.05	0.82
Citizenship					
	% Citizen	98.85	98.69	0.03	0.87
Primary Language					
	% English	63.23	62.34	0.16	0.69
	% Spanish	0.31	0.71	1.14	0.28
	% Haitian/Creole	0.15	0.10	< 0.01	0.99
	% English-Spanish	0.38	0.91	1.77	0.18
	% Other Language	1.15	0.81	0.36	0.55
Youth Behavior/Characteristics					
	% With Disability	0.46	0.50	< 0.01	0.99
	% With Behavior Problem	2.15	2.82	0.83	0.36
	% With Alcohol Abuse	0.15	0.30	0.10	0.76
	% With Drug Abuse	0.92	1.11	0.06	0.81
Experience of Maltreatment					
	% Any Maltreatment	84.17	87.51	4.84	.03*
	% Physical Abuse	12.39	13.19	0.26	0.61
	% Sexual Abuse	3.21	2.52	0.73	0.39
	% Physical Neglect	2.45	2.01	0.30	0.58
	% Medical Neglect	3.36	3.52	0.01	0.93
	% Inadequate Supervision	19.88	20.04	< 0.01	0.96
	% Emotional Neglect	27.60	23.67	4.35	.04*
	% Parental Drug Abuse	42.74	57.60	49.32	<.01*
	% Parental Alcohol Abuse	7.80	8.56	0.34	0.56
	% Domestic Violence	21.87	27.69	10.09	<.01*

Note. Differing superscripts (*) indicate comparisons that were significant p< .05 for continuous variables via t−test, including: age, and for categorical variables via Chi−square, including: all other demographic, characteristic, maltreatment.

alcohol abuse from 2019 to 2020 ($Z = 2.06$, $p = .04$); specifically, Black youth were at no more or less risk than non-Black youth of parental alcohol abuse in 2019 (IRR=0.91, $p = .64$), while Black youth were at a 45 % lower risk than non-Black youth of parental alcohol abuse in 2020 (IRR=0.55, $p = .02$). All other comparisons of maltreatment by race were non-significant (all Z<1.78, all p>.08; Table 2). Thus, as proposed, it appears that White youth and Black youth in the FL Foster Care System were affected uniquely during the COVID-19 pandemic with respect to changes in the experience of documented maltreatment. Specifically, White youth were more likely to be placed in foster care due to maltreatment, while Black youth were less likely to be placed in foster care due to specific forms of maltreatment, during the COVID-19 pandemic.

5. Discussion

In the Spring of 2020, the COVID-19 pandemic – and the implementation of sociopolitical policies to address it – began to affect educational, medical, and related systems in the United States. In response, a spate of op-eds, letters to the editor, and news articles raised important questions regarding the pandemic's effect on child and family well-being and rates of child maltreatment (Baron et al., n.d.; Rapoport et al., 2020). Some experts and advocates noted concerns that the pandemic would accelerate the incidence of child maltreatment, while others noted concerns that reports of suspected maltreatment to child welfare officials may decline due to reduced monitoring of youth by mandated reporters (Baron et al., n.d.; Rapoport et al., 2020). Further, many experts and advocates suggested that youth of color may be particularly adversely affected in these regards (Hooper et al., 2020). In many cases,

Table 2
Changes in rates of types of maltreatment according to youth race for April 2019 vs. April 2020.

Race	Maltreatment Type	April 2019 (n = 1308) IRR (p-value)	April 2020 (n = 993) IRR (p-value)	Z-test	p-value
White	Any Maltreatment	1.03 (.27)	1.15 (<.01)	−2.37	.02*
	Physical Abuse	0.53 (<.01)	0.58 (<.01)	−0.76	0.44
	Sexual Abuse	2.04 (.06)	0.42 (.03)	1.79	0.07
	Physical Neglect	2.59 (.03)	2.17 (.20)	0.79	0.94
	Medical Neglect	1.63 (.16)	0.57 (.11)	1.58	0.11
	Inadequate Supervision	1.02 (.85)	1.39 (.03)	−1.21	0.22
	Emotional Neglect	0.56 (<.01)	0.74 (<.01)	3.21	<.01*
	Parental Drug Abuse	2.07 (<.01)	1.70 (<.01)	0.83	0.4
	Parental Alcohol Abuse	1.21 (.37)	0.92 (.70)	0.8	0.42
	Domestic Violence	0.95 (.64)	0.84 (.12)	0.86	0.39
Black	Any Maltreatment	0.95 (.05)	0.90 (<.01)	1.56	0.12
	Physical Abuse	1.83 (<.01)	1.08 (.65)	1.59	0.11
	Sexual Abuse	0.41 (.01)	1.48 (.34)	−1.88	0.06
	Physical Neglect	0.40 (.03)	0.25 (.03)	1.51	0.13
	Medical Neglect	0.73 (.34)	1.15 (.67)	−0.091	0.36
	Inadequate Supervision	1.02 (.86)	0.72 (.03)	2.13	.03*
	Emotional Neglect	1.73 (<.01)	1.12 (.34)	2.12	.03*
	Parental Drug Abuse	0.55 (<.01)	0.68 (<.01)	−3.18	<.01*
	Parental Alcohol Abuse	0.91 (.64)	0.55 (.02)	2.06	.04*
	Domestic Violence	1.26 (.03)	1.19 (.11)	0.32	0.75
Native American	Any Maltreatment	1.19 (.50)	0.99 (.86)	1.78	0.08
	Physical Abuse	0.00 (.59)	5.38 (<.01)	–	–
	Sexual Abuse	0.00 (.87)	0.00 (.68)	–	–
	Physical Neglect	0.00 (.91)	11.51 (<.01)	–	–
	Medical Neglect	0.00 (.87)	6.11 (.01)	–	–
	Inadequate Supervision	3.81 (.03)	1.00 (.95)	1	0.31
	Emotional Neglect	0.91 (.97)	3.82 (<.01)	−1.1	0.27
	Parental Drug Abuse	1.76 (.24)	1.51 (.02)	0.26	0.79
	Parental Alcohol Abuse	6.52 (.03)	11.77 (<.01)	−0.13	0.9
	Domestic Violence	2.30 (.24)	2.46 (<.01)	−0.05	0.96

Note. Differing superscripts (*) indicate comparisons that were significant p< .05.

commentators lacked contemporaneous empirical evidence due to the rapidly unfolding nature of events. This study sought to provide empirical evidence to further these discussions, to provide preliminary information to advance future study, and to advance discussions related to policy recommendations and decision making with regard to the child welfare system in the context of future crises.

The first and second hypotheses were supported, as this study found that rates of placement into the Florida foster care system decreased for the first half of 2020, with a particularly stark decrease during the "Safer-At-Home" order in April of 2020. The reduction in hotline calls is the most obvious possible source of the reduction. However, previous studies on decision-making ecology within the foster care system have shown that investigators consider practical realities, such as the availability of resources, when making placement decisions (Lindsey, 2004). The pandemic posed significant threats to system resources, including reluctance of foster parents to accept children into their homes, the accessibility of therapeutic services for families, and reductions in state funding in the child welfare system.

In support of the third hypothesis, the percentage of youth removed and placed in foster care specifically due to substantiated maltreatment increased by 3.34 % during the "Safer-At-Home" order in April of 2020 when compared to April of 2019. The increase in rate of child maltreatment in the context of the COVID-19 pandemic is not surprising, given that prior work has demonstrated that rates of child maltreatment increased in the context of prior national emergencies and pandemics (Curtis et al., 2000; Keenan et al., 2004; Peterman et al., 2020; Seddighi et al., 2019). Further, prior theoretical and empirical work demonstrate association between parental stress and increases in rates of child maltreatment (Cicchetti, Toth, & Maughan, 2000; Mikolajczak, Gross, & Roskam, 2019). As such, the observed increased rates of child maltreatment during the Stay-at-Home Order may be due to increased parental stress, as well as lack of child care, increased time spent in the home, changes in economics, and more (Brooks et al., 2020; Brown et al., 2020; Danese et al., 2020; Griffith, 2020). Further research will be needed to fully assess the cause of the observed increase. Additionally, the global COVID-19 pandemic has been broadly associated with increased rates of mental health concerns (Brooks et al., 2020), substance use (Grover & Bailey, 2020), and domestic violence (Bradbury-Jones & Isham, 2020), which have each been associated with increased rates of child maltreatment in prior work (Kepple, 2017). Of note, in the present sample, the percentage of removals and foster care placements due to parental substance abuse and domestic violence were observed to have increased significantly during the pandemic.

The results also offer indirect evidence on the effect of the transition to online education due to the Safer-at-Home order on rates of child maltreatment. For example, pre-school aged children significantly increased as a percentage of all removals in April 2020, suggesting that rates of placements for school age youth decreased overall. Early childhood through adolescence represents an age

group for whom suspected maltreatment is most commonly reported by teachers and educational professionals (When Summer Break Begins, Reports of Child Abuse & Neglect Decline, n.d.). However, further research is needed to more fully explore whether the shifts in rates of removals due to maltreatment are due to reduced contact with teachers and other mandated reporters.

The final hypothesis was also supported, as changes in the rates of child maltreatment as the cause of placement in the FL Foster Care System in the context of the COVID-19 pandemic differed according to the race of the child. Research has established important links between race, poverty, and the placement of children into foster care (Lanier, Maguire-Jack, Walsh, Drake, & Hubel, 2014). Some studies have shown that race functions in combination with other factors such as type of abuse (Gryzlak, Wells, & Johnson, 2005), family structure (Harris, 2003), and caseworker's assessment of risk (Dettlaff et al., 2020). This study demonstrates that overall rates of maltreatment resulting in foster care placement increased for White youth during the Safer-at-Home Order, while rates of placement of due to inadequate supervision, emotional neglect, and/or parental substance use decreased for Black youth during this same period. Both before and during the pandemic, Black youth were less likely than White youth to be removed for maltreatment – with especially low rates of removal for parental substance abuse and physical neglect. The pandemic shifted the experience of Black youth, as these youth were removed less often in the context of the COVID-19 pandemic for inadequate supervision, emotional abuse and neglect, and parental alcohol abuse, but slightly more often for parental drug abuse.

Our work has several important implications for policy and decision making regarding child welfare in the context of local, national, and global crises, broadly, and public health crises specifically. As numerous other investigators have described, the current child welfare system in the United States represents a reactive, remediative approach, rather than a proactive, public health oriented approach to preventing child maltreatment (Fallon et al., 2020; Herrenkohl, Scott, Higgins, Klika, & Lonne, 2020; Rodriguez, Lee, Ward, & Pu, 2020). The present study reveals that a global crisis, like COVID-19 pandemic, has the potential to negatively impact the existing child welfare system. A proactive, preventative, public health-oriented approach may be more beneficial to families and their needs even in the face of emerging crises, such as the COVID-19 pandemic. For example, via health and mental health clinics, schools, child care centers, faith-based institutions, and other community organizations, routine, inexpensive, standardized measures to screen for child maltreatment could be implemented, even during crisis situations (Higgins, Lonne, Herrenkohl, & Scott, 2019). Further, primary prevention in the form of universal, public health campaigns to educate communities with respect to recognition of child maltreatment while destigmatizing services focused on improving parenting practices could withstand crises (Fortson, Klevens, Merrick, Gilbert, & Alexander, 2016; Herrenkohl & Klika, 2019).

Limitations and Strengths. Administrative data, such as SACWIS, provide useful, reliable, and timely information; however, there are several limitations inherent to the current study that must be acknowledged. First, given that the SACWIS receives information directly from the Florida foster care system, data were not collected originally for the purposes of the current study. As such, the results of the current study must be interpreted with the knowledge that this data was not collected for the purposes of addressing the specific aims of this research, and data examining the causes of the COVID-19-related shifts in rates of child maltreatment within the FL Foster Care System were not available.

It should be noted that data included in this study are population data for the foster care system of the state of Florida; however, Florida is one of the most diverse states in the United States, nearly 17 % Black or African American, and 26 % percent Hispanic or Latinx (United States Census Bureau, 2020). In terms of poverty rates, 20 % of Florida youth live in poverty (United States Department of Agriculture Economic Research Service, 2020). Additionally, the Florida Foster Care System is far-reaching, managing and tracking youth in the third-largest population of any foster care system in the United States (Adoption and Foster Care Analysis and Reporting System (AFCARS) Report (2019)). This diversity allowed us to examine racial and ethnic disparities in outcomes of the foster care system as related to the COVID-19 pandemic.

Beyond the diverse, population-based sample, this study had several added strengths. In particular, the current study utilizes a unique dataset, which helps to establish rates of substantiated youth maltreatment within the foster care system both at "baseline" (i.e., prior to), as well as "just in time" to the global COVID-19 pandemic.

5.1. Conclusion

This study revealed additional complexities that provide a foundation for the public debate regarding rates of child maltreatment during the Stay-at-Home Orders placed due to the global COVID-19 pandemic. Specifically, in line with study hypotheses, there was a pandemic-related decrease in the number of youths placed in foster care for the year 2020 compared to prior years dating back to 2001 with the largest decrease in the number of youths placed in the foster care system during April, 2020 (i.e., the Florida-wide "Safer-at-Home" order). Further, rates of removal and placement in foster care due to child maltreatment were found to increase broadly in April 2020 (the period of the stay-at-home order) when compared to April 2019. Of particular note, racial disparities in rates of removal due to recorded child maltreatment were noted. Future research should more fully examine the possible causes of these shifts in the foster care system in the context of the global pandemic. Policy makers should consider these results to develop proactive, preventative approaches to child welfare in order to better withstand the impact of global crises.

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Ethical approval

All procedures performed in studies involving human participants were completed in accordance with the ethical standards of the institutional and/or national research committee and with the 1064 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent

Informed consent and assent were not required for this secondary data analysis study of the State Automated Child Welfare Information System (SACWIS).

Prior publication and submission

This manuscript has not been published elsewhere and is not under consideration by any other journal.

Declaration of Competing Interest

The authors declare that they have no conflicts of interest.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.chiabu.2021.104945.

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